REHABILITATION OF HEALTH SERVICES IN THE PHILIPPINES

Progress Report on
Post War Rehabilitation Activities
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REHABILITATION OF HEALTH SERVICES IN THE PHILIPPINES 1/

Billions of dollars are being spent in this United Nations world for military purposes, for the production of new death dealing devices--for or against aggression--and little nations still live in uncertainty and fear of domination or attack by more powerful neighbors.

The United States, through the Public Health Service of the Federal Security Agency, has been taking part in a different kind of warfare, on the territory of another nation--a large scale, cooperative public health rehabilitation program of the Philippine Republic. A few million American dollars are going a long way in helping to build up the health and health facilities of the Filipino people as well as in setting an example in ways of promoting the international health and welfare.

Post-war rehabilitation of public health services in the Philippines was initiated by the U. S. Public Health Service early in 1946 with an appropriation of $1,000,000 authorized by Congress for use to the end of June 1946. In September 1946, additional funds appropriated to the State Department to continue the rehabilitation program under the Philippine Rehabilitation Act, were transferred to the Public Health Service for administration. Further assistance was voted by Congress for a 4-year health project to continue until June 30, 1950, to involve a total expenditure of $5,000,000 under the auspices of the Public Health Service.

The War, and the Japanese occupation of the Islands during the three year period 1942-45 had played havoc with the health and welfare of the Filipinos. An intensive survey made by the Public Health Service in June and July 1945, had revealed widespread destruction of public health facilities, including laboratories, health centers and hospitals. Clinical supplies and equipment were depleted.

1/ Prepared by Miss Miriam Ziony from official annual and monthly reports of Dr. Howard F. Smith, Assistant Surgeon General, USPHS, in the Philippines. These reports are on file in the Philippine Rehabilitation Branch, Bureau of State Services of the Public Health Service.

Public as well as volunteer medical and nursing services of the pre-war days had gone out of existence or were in a state of deterioration and disuse. Complete destruction of all quarantine facilities presented grave danger of the introduction of plague, smallpox, and other epidemic diseases from nearby infected Asiatic ports.

General sanitation facilities were found "reduced to a level which constituted a national hazard." Contaminated water supplies, sewer lines and sewerage systems that had been put out of commission in the enemy bombardments, rats and malaria-breeding mosquitoes that flourished and multiplied in increasing numbers as a result of disrupted and disorganized sanitary facilities had contributed to the spread of sickness and disease among the people.

Preliminary surveys indicated that chief among the health problems were: malaria, tuberculosis and venereal disease control; general sanitation and quarantine services; and maternal-child health and nutrition, with more adequate hospital facilities, medical and laboratory equipment and personnel as primary needs.

By the end of June 1946, a number of hospitals and medical centers in various parts of the Philippines had been rehabilitated and furnished with supplies and equipment; an intensive training program had been completed for the malaria work; and emergency programs were under way in malaria, tuberculosis and venereal disease control. Rebuilding and repair of sewers and water systems, construction of sanitary facilities, a rodent control program, and distribution of serums and vaccines, as well as the beginning of a maternal and child welfare program, had also been initiated.

By the end of June 1948, after a two-year period of joint United States and Philippine organization and administration, the rehabilitation work had become further established and integrated. All projects financed from funds provided for through the Rehabilitation Act were being carried out

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in accordance with the provisions of a joint cooperative agreement made July 17, 1946, between the Secretary of Health and Public Welfare of the Philippine Government in behalf of the Republic of the Philippines and the representative of the U. S. Public Health Service on behalf of the Government of the United States.

Under the joint agreement, rehabilitation programs have been submitted by the Secretary of Health and Public Welfare of the Philippines and after review, evaluation, and approval have been activated through allocation of rehabilitation funds. The rehabilitation program is under direction of an Assistant Surgeon General of the U. S. Public Health Service, who is responsible for efficient administration of the programs and accountable for judicious expenditure of the rehabilitation funds. The Assistant Surgeon General in Charge has also been designated by the President of the Philippine Republic as Presidential Advisor on Public Health and Quarantine matters.

All projects under the Joint Rehabilitation Program have been planned at a level calculated not to overtax the means of the Philippine Government when the time comes for it to assume complete responsibility. For the United States to establish very elaborate health facilities which the Philippine Government would later not be able to maintain upon withdrawal of the United States was felt to be a disservice to the Filipinos. Budgeting of United States funds over the four-year period is therefore planned on a sliding scale, with a gradual decrease from year to year, as the allocation of funds by the Philippine Government increases.

All personnel engaged in the rehabilitation program, numbering about 1,000 employees as of June 30, 1947, and 884 employees by June 30, 1948, with only

a few exceptions, have been Filipinos. This policy of employing Filipinos will facilitate the shift of responsiblity when the obligation and responsibility of the Public Health Service come to an end. Programs have been activated for control of malaria; tuberculosis; venereal disease; leprosy; sanitation projects including sanitary engineering, industrial hygiene, sanitary food control and immunization; maternal-child health and nutrition; rehabilitation of laboratories; training centers; health education; and rehabilitation of the National Quarantine service in the Philippines.

MALARIA CONTROL

Malaria constitutes one of the major public health problems in the Philippines, with over 4,000,000 attacks of this disease occurring annually, according to estimates made just before the Public Health Service control program was begun in 1946. Surveys made indicated an increase in intensity and prevalence of malaria during the war years, with some coastal areas affected that were formerly free of malaria. In some villages as many as 70 percent of the children 10 years of age and under showed signs of the disease. Prevalence among adults was so high that it was difficult to obtain sufficient labor for rehabilitation of agriculture or other industries.

Objectives of the Public Health Service Malaria Control Section have been: (1) immediate relief to malaria victims; (2) eradication of the mosquito vector; (3) mass education of the public, especially in rural areas, on the importance of malaria control; (4) rehabilitation of man power in food production areas; and (5) researches on new methods of vector control. As the disease was closely related to the general economic rehabilitation of the Islands, special efforts were made for its eradication.

A limited budget of $70,000 per year in the Bureau of Health of the Philippine government has allowed for operation of only five poorly equipped

Malaria units and the Malaria Central Laboratory in Tala, Rizal, where prospective malaria workers were trained prior to the War. This laboratory which had been left in shambles and without equipment or supplies has been rehabilitated to pre-war level through the Laboratory Rehabilitation Section.

In order to carry out its objectives of treating as many malaria patients as possible, to put them back on their feet and back on the farms and in industry, the Malaria Section prior to July 1946, spent two months in selective and intensive training of 160 physicians, engineers, entomologists and technicians, who were activated upon completion of training, into 20 malaria control units operating from northern Luzon to southern Mindanao. Additional professional workers have been trained for the program during the past two years.

Functions of the Malaria Control units have included (1) making malaria surveys and collection and evaluation of malaria indices, determination of presence and incidence of malaria infection; (2) relief through free treatment of malaria patients in dispensaries or in their own homes, laboratory services and advisory and consultative services to patients and physicians; (3) malaria control by construction, repair and maintenance of anti-malaria siphons and dams with sluice gates, spraying of DDT by plane, by hand and power sprayers, brushing and clearing of streams, channeling, ditching, etc.; and (4) malaria educational campaigns through lectures and conferences with medical societies, hospital personnel and private medical practitioners; lectures, demonstrations and conferences in schools; public meetings; house to house visits, etc., and by the showing of motion pictures on malaria.

The educational program has included lectures in local dialects, presentation of demonstrations, plays and dramas depicting the advantage of

modern malaria prevention and control. "Malaria Clubs" were organized in many localities to help in the dissemination of scientific knowledge on malaria. School teachers, students and other civic-minded persons have been recruited as members. The intensive educational campaigns have resulted in willing submission for blood examination and atabrine treatment on the part of many Filipinos who had previously been misinformed, suspicious, and even antagonistic in their attitude.

In areas where malaria control activities have been in effect, school enrollment for the 18 months from January 1946, through June 1947, was found to have almost doubled while absenteeism due to malaria was reduced from 50 percent daily to less than one percent.

Large scale agricultural and industrial enterprises engaged in production of sugar, copra, hemp and lumber are continuing to maintain control measures once they have been established and their benefits demonstrated. Resignation is noted of some of the trained and experienced workers from the Public Health Service units to accept more remunerative positions in malaria control with private agricultural or industrial organizations. This growing industry interest in control measures has been considered most encouraging.

The extent of the malaria control activities for fiscal 1947 and 1948 can be seen from the Public Health Service statistics. A total of 216 malaria dispensaries were in operation as of June 30, 1947. In February 1948 there were 233 dispensaries. By the end of June 1948 these had been reduced to 149. Thirty percent of the blood tests made the first year and 20 percent the second year were found positive for malaria.

	July 1946 to June 1947	July 1947 to June 1948
No. of persons given free blood tests for malaria	344,325	300,512
No. of persons treated free at dispensaries	130,343	71,864
No. of persons re-treated at dispensaries	30,574	80,260
No. of house to house visits by control unit phys.	88,904	53,886
No. of persons treated free at their homes	164,406	61,450
No. of persons re-treated free at their homes	22,052	32,099
Total malaria attacks treated at dispensaries or homes	347,375	245,673
No. of persons reached in house to house visits, educational campaigns and lectures	750,150	466,330

Preliminary studies conducted to determine type and frequency of untoward effects of atabrine, showed that out of 108,626 patients treated by Public Health Service units, 78 or 0.07 percent showed signs or symptoms of toxicity, ranging from nausea and vomiting to manic excitement. Additional studies also revealed very small percentages of malaria patients suffering untoward effects from atabrine.

An interesting experiment has been under way in the Sierra Madre Lumber Company camp in Barrio, and at the National Agricultural School in Kamingaon, Kabonkalon, Negros Occidental, to test the effectiveness of Chloroquine and Paludrine as suppressive and as curatives for malaria. The 300 inhabitants of the lumber camp including adults and children, were divided into two experimental groups of 125 persons to be tested with Chloroquine and a similar number with Paludrine. A third group of 50 persons served as a control group. Findings showed that chloroquine and paludrine, each given weekly, did not completely suppress malaria in Negros Occidental. Further studies are being made on the value of these drugs.

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Mosquito surveys and actual control measures for destruction and elimination of the mosquito vector have formed an important part of the malaria program. Three entomological survey teams, each composed of an entomologist and two technicians, were given special trainingand assigned to various parts of the Islands (1) to collect, identify and disect anopheles mosquitoes, (2) to determine types of malaria vectors existing in the Islands (3) to compile data on types of mosquitoes found; (4) to assist the malaria units in a coordinated effort in control of malaria; (5) to conduct field tests and other studies related to control of the vector or vectors found. In December 1947, for the first time the malaria species A. Mininus flavisostris was found breeding within the city of Manila. A number of other species of mosquitoes were also found breeding in Manila. In January 1948, finding was reported of A. leucosphyrus, a far more dangerous malaria vector than A. moculatus, breeding on hoof-prints of caraboas with a small amount of water and along edges of streams in thick forests in Candone Tabla Valley, Negros Occidental.

In April 1947, a new method of control of mosquito larvae in streams was instituted whereby a DDT solution mixed with sawdust is dumped into streams. This method does not require any sprayers or other apparatus. It has been found effective and economical and has been adopted as standard procedure by all the malaria units.

Two malaria units were detailed March 1948, in the City of Manila, in connection with a mosquito and fly abatement program in the City. This was a joint enterprise of various agencies such as the Manila City Health Dept., the U.S.P.H.S., Junior Chamber of Commerce and social and civic organizations.

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Limited funds for the fiscal year 1948 - 49 and the necessity for utilization of such funds to greatest advantage resulted in the deactivation of 10 of the 20 operating malaria units of the Public Health Service as of June 30, 1948.

TUBERCULOSIS CONTROL

The postwar tuberculosis control program was begun by the Public Health Service in April 1946, in cooperation with the Philippine Department of Health, the Tuberculosis Society and other agencies.

Steps initiated prior to the beginning of the fiscal year 1947 included (1) an evaluating of the extent of the T. B. problem (2) appraisal of all types of anti-tuberculosis facilities in the Islands, (3) development and initiation of an emergency program to combat the disease and (4) drafting of a long range program for its eventual control.

Tuberculosis has long been known as the leading cause of death in the Philippines, responsible for 15 percent to 20 percent of the deaths from all causes and one of the leading causes of death in infants under one year of age. More than 35,000 persons die annually of tuberculosis in the Islands and the death rate there from that disease is five times as high as in the United States.

During the 1936-1940 period, deaths from T. B. in the Philippines ranged from 213.7 to 219.4 per 100,000 of population. Complete figures were not available for 1941-46, but on the basis of studies made in Manila in 1944-46, it was estimated that T. B. morbidity and mortality rates were on the increase, with a higher death rate in Manila than in the Philippines

as a whole. Approximately 420,000 persons were reported ill from the disease in 1946 in all parts of the Islands. The problem, already enormous before the War, had been greatly aggravated due to the fact that the War not only increased all predisposing factors to the disease, but also destroyed most of the means for coping with it.

Organizations engaged in tuberculosis control work were: The Tuberculosis Control Section of the Philippine Bureau of Health, the Philippine Tuberculosis Society, the Manila Health Department and the White Cross Preventorium at San Juan, Rizal. Average annual prewar budgets for tuberculosis work in the Islands had amounted to $500,000 including $50,000 for the Bureau of Health, Tuberculosis Control Section; $400,000 used by the Philippine Tuberculosis Society; and $50,000 by the White Cross Preventorium.

Postwar surveys showed an insignificant number of tuberculosis beds available in general hospitals most of which refused to admit known cases of tuberculosis. Sanitarium beds numbered 1,000, including 750 beds at the Quezon Institute and 250 at the San Lazaro Hospital. The San Lazaro Hospital, the Quezon Institute and the Central Dispensary of the Philippine Tuberculosis Society maintained clinics at which fluoroscopic and roentgenographic examinations and pneumothoracic treatments were available. The Philippine Tuberculosis Society clinics at Cebu and Iloilo were reported ready to resume activities as soon as X-ray and fluoroscopic equipment could be provided. All other prewar clinics were reported destroyed.

A fund of $115,175.80 available to the Public Health Service Tuberculosis Control Section for the fiscal year ended June 30, 1946, was used in carrying

out an emergency program in cooperation with the Bureau of Health (1) to re-activate as many as possible of the tuberculosis clinics existing prior to 1942 by supplying these clinics with critically needed equipment and supplies; (2) in contracting for construction and equipment of a tuberculosis laboratory, administration center and training center and a pneumothorax clinic for the Bureau of Health on the grounds of the San Lazaro Hospital; and (3) for a chest clinic in Tondo, Manila, in an area of dense population and high tuberculosis mortality. Aid was given also to four existing clinics to help form a nucleus for a long range program.

Agreement was reached early in fiscal 1947 with the Department of Health and Public Welfare and the Bureau of Health covering operation of a joint program for control of tuberculosis. The more immediate plan was determined as one of preventing transmission of T. B. infection, finding and treatment of early cases in clinics rather than care for advanced cases in sanatoria, which are very few in number.

The joint long range program was planned to include (1) an anti-tuberculosis campaign to register, isolate and treat all infecious cases; (2) to register and periodically test all home contacts of known infectious cases; (3) to encourage parents with infectious T. B. to surrender new born babies to care of healthy relatives or to a preventorium for as long after birth as possible and to give BCG to such children before return to parents; (4) to give priority in case finding surveys to food handlers, domestics handling food or caring for children, school teachers, etc.; and (5) to introduce BCG vaccination of tuberculin non-reactors as soon as possible. Plans were made also for (1) organization of chest clinics in a number of large cities as demonstration

centers with modern techniques and facilities for T. B. Control; (2) encouragement of physicians, hospitals, clinics and government officials to expand treatment and isolation facilities for T. B. patients in their own communities; (3) operation of training classes for physicians, nurses, technicians, statisticians, etc.; and (4) dissemination of information covering T. B. programs to the medical profession and to the community through printed matter, motion pictures, lectures, etc.

During fiscal 1947 activities based on the above plans were carried out primarily in Manila because of the desirability of using Manila as a medical center and because of lack of sufficient radiographic and other equipment to activate programs in other cities or in the provinces. Field activities of the T. B. control section during the year consisted only of a temporary chest clinic at Bacolod in cooperation with the Occidental Negros Provincial Hospital and in aiding the Philippine Tuberculosis Society with equipment to rehabilitate and operate a chest clinic in Cebu and one at Iloilo.

Achievements during fiscal 1947 included: (1) construction of the National Chest Center within the grounds of the San Lazaro Hospital to serve as Headquarters of the program and to increase facilities of the chest clinic already in operation there; (2) development of an integrated program for Manila, using facilities and services of the Philippine Bureau of Health, the Manila Health Department, the Philippine T. B. Society, the White Cross Preventorium and the Public Health Service; (3) completion of plans for six units patterned after the Manila Center to be activated in six provincial capitals under auspices of the joint cooperative program.

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The Tondo Chest Clinic, consisting of two quonset huts, was activated April 1, 1947. In the 3 months, April to June 1947 it had a total attendance of 6,519 persons, made 630 fluoroscopic examinations, took 4,923 small x-ray films and 706 large x-rays, diagnosed 660 new T. B. cases and gave 97 pneumothorax treatments.

At the Iloilo Clinic for the same period, there was an attendance of 3,065, with 2,408 new cases registered, 2,469 fluoroscopic examinations held, 379 new T. B. cases diagnosed and 22 pneumothorax treatments given.

A traveling x-ray unit equipped with a transportable 70 mm photofluorographic was also activated in April 1947, to function in the x-raying in schools, colleges, industrial organizations, etc. The first activity of this unit was a survey of over 5,000 students attending the Far Eastern University of Manila. Results showed 265 students or 5.1 percent with definite T. B., 94 or 1.8 percent suspected of T. B., 156 or 3.0 percent with significant pathological lesions other than T. B. and 4,688 or 90.1 percent negative. In the 25-34 year age group, which contained nearly 25 percent of all the students, 10.7 percent showed lesions of definite or suspected tuberculosis.

The importance of a student chest x-ray program in colleges and universities was emphasised because the future leaders of the nation come from this group. Such a program in Manila would result in nationwide benefits because the 80,000 or more students come to Manila from all the provinces of the Republic.

By the close of the fiscal year, arrangements were made for similar surveys at the University of the Philippines and at the University of Santo Tomas. It is believed that a program for x-raying of all students annually at time of enrollment would reveal 4,000 to 5,000 cases of tuberculosis of

which 3,300 to 4,500 will be responsive to treatment and cure without disrupting the students' educational courses. Each year of untreated cases decreases the chances of recovery and increases the number of new cases through unknown and unintentional spread of the disease.

The plan for integrated T. B. activities in Manila provides for the Manila Health Department to assume responsibility for home supervision of T. B. cases and contacts and for supervision of contacts of recent deaths from tuberculosis. A visiting nurse service and maintenance of a tuberculosis case registry for the City of Manila by the Public Health Service takes care of this. At the end of June 1947, there were 39 nurses on duty. From December 1946 to June 1947, there were nearly 51,500 nursing visits made. Over 2,200 homes of T. B. cases and over 1,500 homes of T. B. deaths were visited. Over 13,100 contacts of T. B. cases and 9,700 contacts of T. B. deaths were given advice and 562 nursing treatments were made.

Aid to the Philippine Tuberculosis Society was given in the form of equipment and instruments to reactivate the thoracic surgery service at Quezon Institute. Also, two fluoroscopic units were provided the Society during the year for its clinics at Cebu and Iloilo.

Aid was given to the White Cross Preventorium to enable it to expand its facilities for care of children of tubercular parents. This activity is considered important in the Philippines because of lack of isolation facilities for T. B. cases. As a result of this lack, children of persons with tuberculosis are subjected to prolonged intimate exposure to the disease, with a high infant T. B. death rate resulting.

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Facilities at the Preventorium expanded from a total bed capacity of 190 at the end of June 1946, to 290 beds by June 30, 1947, and the census of patients rose from 96 to 210. No radiologic examinations were made during fiscal 1946, but by the end of June 1947, there were 322 such examinations reported at the Preventorium.

By the end of June 1947, the T. B. Control Section had made headway also in organization of a provincial chest clinic program. All provincial clinics planned by the Section are to be partly supported by local funds from the beginning and are to be made self supporting at the earliest possible date, estimated at 12 to 18 months from date of activation. Government officials, civic organizations, medical societies, etc., of several larger communities requested clinics in their localities with this understanding in mind.

The policy of the Public Health Service rehabilitation program is not merely to dispense funds to the Philippine Government for public health work, but to stimulate that government to increase its own budget for such work with the gradual development of the program. With this in view, efforts have continued for development of a cooperative program with various Philippine health agencies, financially as well as technically.

The Health Department, Municipal Board of the City of Manila in July 1947 created a T. B. Control Section in the Manila Health Department and provided an annual budget of $8,280 for operation of a chest clinic, which with the aid of the Joint Program, made possible the beginning of an X-ray program for all applicants for health permits, city government employees, school teachers, etc.

The T. B. Control Section, Bureau of Health also purchased a photofluorographic unit to add to the equipment of the Joint Program and $40,000 was

granted to the T. B. Control Section to defray costs of a new 2-story building for a Chest Clinic for the National Chest Center.

The Provincial Governments of Batangas, Occidental Negros and the City of Baguio approved annual budgets and other provisions for their share of upkeep of Chest Clinics in their localities in cooperation with the program. The Occidental Negros Chest Clinic in Bacolod was started September 1947, in temporary quarters pending erection of a new, permanent clinic building. This was the first of several clinics opened under the Joint Program on a cooperative basis with the provincial health authorities. Great interest of the population and good attendance were reported.

During fiscal 1948, plans and programs for control of T. B. were expanded considerably and publicity and health education work were intensified in cooperation with medical and educational and civic groups, Parent Teacher Associations, etc.

Plans were developed for immunization of children with BCG and a large quantity of BCG was purchased from the Pasteur Institute in Paris. Results of a survey at the Balagtas Elementary School in Manila where over 3,000 pupils were tuberculin tested in December 1947, showed that because of the seriousness of the T. B. situation in the Philippines it is too late to try to immunize children with BCG on a mass scale in the elementary schools. By the age of 6 years it was found many children have already died of tuberculosis and of the survivors, more than one-half show positive tuberculin reactions. It was decided, therefore, to concentrate on BCG for pre-school groups, on new-born babies in maternity clinics, infants registered in well-baby clinics, etc. During the first six months of 1948, in the Preventive Pediatrics Section of the Philippines General Hospital, 422 children were given BCG in the well-baby clinic and 739 new born babies were also immunized with BCG.

Personnel assigned to the BCG Immunization Program were trained in procedures of inoculation, etc. The BCG work was carried on only on a small scale, in institutions in fiscal 1948. It was not clear whether a mass immunization effort would be undertaken because Rehabilitation funds were to be cut sharply and it was not known how much money would be available from the Philippine Government. In April 1948, a conference was held in Manila with Dr. Thomas Parran representing the International Children's Emergency Fund regarding possible assistance from the ICEF if a satisfactory joint BCG project were set up.

A chest X-ray survey of 9,000 students at the University of Santo Tomas made in 1948 showed 225 students or 2.5 percent with definite T.B., 342 or 3.8 percent suspicious of T.B. and 172 students, or 1.9 percent with significant non-tubercular pathology.

A tuberculin testing survey of pupils at the Santa Ana Public School completed April 1948, showed the same magnitude of T.B. reaction as in the Balagtas Public School.

Inadequacy of electrical apparatus, etc., in schools and other buildings where chest x-rays were planned resulted in construction of a traveling x-ray unit which was completed in April 1948. This unit, mounted on a large Chevrolet truck has a 25KVA generator, a fully equipped darkroom and space for transporting a dismantled photofluoroscopic unit. It will facilitate x-raying work in schools and colleges.

An important achievement of the year was the conversion of many physicians from a purely clinical and treatment point of view to a public health and preventive line of thinking concerning T.B. control.

During the 21 month period from October 1946 through June 1948, over 157,000 satisfactory small chest X-rays were made under the TB Control program in the Philippines. Over 127,500 of these films, or 81 percent, were negative; 6.2 percent showed definite TB lesions, 8.8 percent showed suspected TB, and 2.4 percent significant non-tubercular pathology.

VENEREAL DISEASE CONTROL

Surveys made prior to initiation of the venereal disease program in February 1946, revealed almost a total lack of equipment and supplies, both in Manila and in the provinces. Police enforcement of existing laws against prostitution, primary vagrancy, etc. was found exceedingly poor, prosecution extremely weak, and convictions rare. At the same time, police and military management of venereal disease control programs hindered rather than helped in checking VD in the Islands.

A new policy was inaugurated by the Public Health Service utilizing cooperation of patients instead of force. A Venereal Disease Control Board was activated and specific functions of police and health authorities were clarified and separated. Equipment and supplies were procured for 10 provincial clinics and the Manila Social Hygiene Division during fiscal 1946. To make the VD Hospital look more like a hospital and less like a jail, restraining screens and policewomen guards were removed.

A previously existing but poorly equipped clinic on the San Lozaro grounds in Manila was reorganized into a Rapid Treatment Center for examination, diagnosis, and rapid treatment of venereal disease cases and for service as a training center for personnel. Contact interviewing was initiated and civilian investigators, trained at the center, replaced the

police and military police in the City of Manila and in the provinces to apprehend VD contacts without resort to force. Treatment of male patients, previously entirely neglected, was begun before the end of June 1946. The one-injection method of treatment for gonorrhea with penicillin was introduced for the first time in the Philippines with 93 percent cures. Inauguration of the rapid treatment of early syphilis was reported successful in cutting the time required for cure from 1½ years to 9 days.

Over 15,000 examinations were conducted for venereal disease at the Manila Center from March through June 1946, and 15,270 examinations were made at provincial clinics in the same period.

Before the end of fiscal 1947 the Public Health Service had completely equipped a modern Rapid Treatment Center in quarters provided for by the City of Manila. The Center includes a laboratory and a dispensary for examination and treatment of VD patients. The Public Health Service paid the salaries of 28 of the 60 employees engaged in operating the Center in that year, including 15 medical officers, 2 nurses, 2 bacteriologists and 4 investigators. The Center is used also as a training school (1) for personnel for provincial clinics, (2) for refresher courses for private physicians and (3) nurses for VD control.

The expanded educational program of fiscal 1948 included continual showing of VD films in different parts of the City of Manila under the auspices of the Women's Auxiliary of the Manila Medical Society and the Manila Health Department, and lectures, film showings and daily conferences with patients attending clinics in Manila and in the provinces. Lectures and films on the public health phase of VD control were given to student nurses and to officers and enlisted men of the 738th M.P. Battalion, to sanitary inspectors of the Manila Health Department and to private medical practitioners, also to 3rd and 4th year medical students of the University of the

Philippines as part of their instruction in dermatology and syphilology. A number of lectures were given and V. D. films shown by the Medical Officer in Charge of the Angeles Social Hygiene Clinic and conferences were held with the Mayor, with town officials and Army Officers of Camp Angeles on control work in the town and vicinity.

Under sponsorship of the Manila Medical Society, V.D. films were shown also to several schools and colleges for girls in the City of Manila. Public school authorities have decided, however, that it is unwise to include in their school curriculum any subject related to sex hygiene in the elementary or even in high schools.

The Manila Rapid Treatment Center, in October 1947, introduced examination of the blood of new-born babies for syphilis at the Maternity and Children's Hospital. In November, blood serologies of 485 new-born babies in the Hospital were performed, including Kahn and Kolmer tests on blood from the umbilical cord after birth. Of the 485 tested, 23 or nearly 5 percent were found positive for Kahn and 43 or nearly 9 percent were positive for Kolmer.

Periodic physical examinations are required of hostesses working in bars and night clubs in Rizal City, Angeles, Manila and other cities and follow-up treatment is given those with V.D. In November 1947, a resolution was unanimously passed during a meeting of the Joint Army-Navy Civilian V.D. Control Board requesting the City Health Officer of Manila to require all female employees and attendants in the Massage Clinics of the city to undergo physical examinations for detection of venereal infection before issue of permits to work and that they be subject to examination twice a month there-after like waitresses and hostesses.

Greater understanding of the problem by police vice squads and better cooperation with the social hygiene clinics, the Department of Health and the medical investigators have resulted in improved case finding methods and in persuading infected persons to come for treatment.

From July 1946 through June 1947, the Manila Rapid Treatment Center reported 61,950 patient visits made, including 22,358 male and 39,592 female; 36,777 individuals examined and 5,728 persons treated for V.D. including 4,363 treated for gonorrhea, 1,308 for syphilis and 57 for other types of venereal diseases.

In the provincial social hygiene clinics, operated jointly by the Philippine Bureau of Health and the Public Health Service, during the same period 109,592 patient visits, including 10,652 male and 98,940 female, were reported, 90,994 physical examinations including serological and bacteriological laboratory tests were made and 21,175 cases of V. D. were treated, 14,787 for gonorrhea, 6,151 syphilis and 237 other types.

From July 1947 through June 1948, according to monthly reports made in the venereal disease control program, the Manila Rapid Treatment Center showed an increase in number of patients and treatments. As many as 81,897 patient visits, 43,892 male and 38,005 female were made; 53,554 individuals including 25,546 male and 28,008 female, were examined, a total of 11,309 as new registrants; and 6,948 individuals were treated for venereal disease including 3,649 for gonorrhea, 3,207 for syphilis and 92 for other types. Over 62,900 laboratory procedures were reported, including 22,857 blood extractions for STS (serological tests for syphilis), 1,668 Darkfield examinations, 453 spinal taps made, 1,105 specimens for GC cultures taken, 31,763 smears examined, 5,048 Kahn tests in clinics of associated hospitals and 19 other tests for venereal disease.

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The Provincial Clinics also showed increased activity in venereal disease control during fiscal 1948. Incomplete reports for the year indicated more than 110,000 patient visits, nearly one-fifth of them male; over 90,000 individuals examined, with 15,000 or over 16 percent found positive and treated for V.D. Incomplete figures for the Provincial Clinics' Laboratory report gave over 92,000 laboratory procedures, including 11,209 blood extractions for STS, 80 Darkfield examinations, 5 spinal taps, 74,552 smears examined, 6,543 Kahn tests in clinics of associated hospitals and 16 other tests for V. D.

LEPROSY CONTROL

The War had resulted in the dispersal throughout the population of over 5,000 persons with leprosy, who had previously been segregated in leprosaria in the Philippines.

Plans were developed in 1946 for 4 mobile skin clinics to tour the Islands (1) to render free treatment to persons with any type of skin disease; (2) to record and treat all cases of leprosy appearing for treatment at these clinics and referral of names, addresses and laboratory findings to district or provincial health officers for further treatment or segregation; (3) to procure and furnish to the Leprosy Control Section of the Bureau of Health histological specimens from all clinical cases of leprosy found bacteriologically negative; (4) to instruct local physicians, nurses and school teachers through lectures, demonstrations of cases where possible and through reports written in popular language with specially prepared photographs and illustrations on early diagnosis of leprosy, especially in school children; (5) to conduct compaigns for education of the population on leprosy, particularly leper families and other leper contacts.

Equipping and activating a nursery at the Culion Leper Colony for the purpose of separating immediately after birth children of leper parents and to render material aid to the Leper Colony were also parts of the program. In December 1946, four physicians were assigned to the Colony for intensive training in the recognition of early signs of leprosy in children.

From the middle of April to June 15, 1947, these physicians saw and disposed of 2,130 different cases of skin diseases. In this group these were 79 cases of leprosy, or 37 per 1,000 averaging 3.7 percent among the daily run of patients.

Two of the 4 mobile skin clinics started operation the last week of June 1947, and the other two several months later. Each unit was in charge of a medical officer specially trained in dermatology and completely equipped with facilities and supplies for diagnosis and treatment of all types of skin diseases. Treatments, including dressings and medicines are free.

By the middle of July 1947, two trucks were ready with the necessary equipment and medicines for field work. At the end of July, Unit No. 1 of the Traveling Skin Clinic treated 176 cases of skin disease in Bulacan province, 2 of them found to be clinical lepers. At the San Lazaro Skin Dispensary, 753 cases of skin diseases were seen, 5 of them were bacteriologically positive lepers, 2 clinical lepers and 3 were suspects. In August, Units 1 and 2 worked in Bulacan and Rizal provinces, covering various towns. Local officials were reported very cooperative and requested the clinics to stay longer. The public response was very good. Over 2,600 new skin cases were seen, and 3,186 total treatments were given during the month. Thirty-six cases of leprosy, or 1.3 percent were detected.

Lectures and demonstrations are given to implement the work of the Traveling Skin Clinics on transmission and prevention of leprosy. Relatives of known lepers and contacts are examined. Families of lepers are given intensive instruction on how the disease is transmitted and how it may be prevented.

Difficulties were reported by all four Traveling Skin Clinics in giving lectures and demonstrations to the public because of a need to picture adequately the different kinds of leprosy lesions. Several mounted colored pictures made for a trial demonstration were found very satisfactory in projection on a screen. By February 1948, a number of projection slides for the more important signs of common lesions of leprosy were prepared and ready for districution to the 4 Units, and the 4 Medical Officers in Charge of the Units were given demonstration on use of the slides. It was observed on various occasions that after the lectures and slide-showing ~~patient~~ patients came voluntarily to the Skin Clinic with leprotic lesions.

From January through June 1948, nearly 31,000 persons attended lectures and demonstrations and 29,000 patients were treated by the 4 traveling skin clinics, with a total of over 61,300 treatments. Of the 29,000 patients treated,63 were found bacteriologically positive for leprosy, 40 were clinical lepers and 34 were suspicious. Nearly 26,600 school children were examined during the same period by the Skin Clinics, with 2 children reported bacteriologically positive, 4 reported clinical lepers and 13 suspicious of the disease. Over 1,200 members of lepers' families examined, showed 38 bacteriologically positive, 40 clinical lepers and 71 suspicious while among 437 contacts examined there were 8 bacteriologically positive, 3 clinical lepers and 2 suspected. 1/

1/ Complete figures for the entire fiscal year 1948 were not available in the monthly reports.

In April 1948, the Nursery at Culion where children born of leper parents and separated from their parents are taken care of, was officially opened. Of the 557 female inmates of the Colony, 248 between the ages of 15 and 45 years were reported married. Assignment of initial personnel at the Nursery was completed but no patients were reported until May when 2 infants were admitted. Arrangements were made for wet nurses to feed the babies in exchange for a can of condensed milk every 3 or 4 days to provide better nutrition for the infants, the pastor of the Protestant Church has volunteered use of his congregational car to take the wet nurses to and from the Colony which agreed to furnish gasoline and a chauffeur. The Chief of the Colony expects an average birthrate of 2 children a month or 20 to 24 a year among the leper patients at Culion.

GENERAL SANITATION PROGRAM

Rehabilitation and construction of general sanitation facilities were undertaken by the Public Health Service in cooperation with the U. S. Navy, the Philippine Bureau of Health, the Bureau of Public Works, the Manila City Health Department and other agencies.

To counteract the grave threat to the public health found in the war-time disruption of sewage disposal facilities in over-crowded areas of Manila particularly, as well as in other parts of the Islands, funds were allocated by the Public Health Service and before the end of June 1946, 3 public toilet buildings made of concrete and with a seating capacity of 8 persons each, had been completed on municipally owned land in Manila and 8 additional buildings were on the way to completion in that city. Funds were appropriated also for construction of public toilets and baths at Siley, Occidental Negros, and contracts were made for several public toilets in the town of Mariveles, adjacent to the National Quarantine Station at that place.

Installation of a complete water supply system at the Central Luzon Leprosarium, rehabilitation of the water supply for the City of Cavite and completion of arrangements for purchase, installation and operation of chlorination plants for 80 municipal waterworks in cities of varying sizes throughout the Philippines helped considerably in the improvement of sanitary controls, as did also the ordering of supplies and equipment for rehabilitation of the water analysis and control laboratory of the Metropolitan Water District of Manila.

A rodent control campaign was in full swing by the end of fiscal 1946, with the Public Health Service providing financial and advisory assistance to the Manila City Health Department.

As a safeguard against epidemics, 100,000 doses of smallpox vaccine were furnished monthly by the Public Health Service to the Commonwealth Government pending adequate production of vaccine by local government laboratories, and special efforts were made to assist in the rehabilitation of destroyed or looted laboratories essential for public health work and for control of communicable diseases.

Laboratories that were completely rehabilitated insofar as supplies and materials were concerned or for which supplies and equipment had been ordered by the end of fiscal 1946, were: the Bacteriological laboratory, Institute of Hygiene, engaged in production of cholera, smallpox and dysentery vaccines; the Nutritional research laboratory, North General Hospital, Bureau of Health; the Laboratory for control of Animal Diseases, Bureau of Animal Industry; Water Analysis and Control Laboratory, Metropolitan Water District, Manila; the Central laboratory and 5 skin clinics, Leprosy Section, Bureau of Health; and the Laboratory of Pathology and Bacteriology, College of

Medicine, University of the Philippines. In addition, the Public Health Service paid the salaries of a number of specially trained laboratory workers engaged in production of vaccines and specially trained laboratory personnel engaged in nutritional research activities.

The program for 1946-47 included (1) continued aid to water works installations and water purification; (2) replacement and repair of deep-well hand pumps for artesion wells serving rural communities; (3) continuation of construction of public toilets--especially for areas where existing toilet facilities were razed by war operations; (4) intensification of the rodent control campaign in Manila and institution of similar programs in other port areas in the Philippines; and (5) aid to municipal projects involving such phases of general sanitation as fly and mosquito control, garbage collection and disposal, etc.

From April to June 30, 1947, a joint sanitation program was developed between the Public Health Service and the Philippine Department of Health and Public Welfare. By the end of fiscal 1947, there were 120 employees paid from Rehabilitation funds operating in the field with continued expansion planned for the following year. The expanded program covered the fields of sanitary engineering, industrial hygiene, sanitary food control and immunization.

Sanitary Engineering program. Objectives of the Sanitary Engineering program were: (1) chlorination of at least 400 water supplies for cities, and municipalities throughout the Philippines within the time limit of the program; (2) establishment of at least 9 water analysis stations at strategic points to serve all areas of the Islands in maintaining safe water supplies;

(3) construction of one pilot water purification plant in cooperation with the Metropolitan Water District, Manila, to conduct studies for improvement in water purification methods; (4) assistance to the City of Manila in disposal of wastes; (5) studies on feasibility of improving rural sanitation and sanitation of small rural settlements through government manufacture and sale to such communities of prefabricated septic tanks and superstructures; and (6) sanitary surveys of existing and prospective water supplies.

In June 1947, there were received at Manila 80 chlorinating units of various capacities to serve municipalities of from 10,000 to 200,000 persons each, ordered from the United States a year earlier. Funds were allocated and construction authorized under supervision of the Bureau of Public Works for installation of these modern chlorination units with a daily capacity of 7,500,000 gallons in 23 communities serving a total population of 220,000 persons. By the end of fiscal 1947 in 17 of these communities with a daily capacity of over 6,300,000 gallons and serving a population of over 177,000 the units were reported under construction and a number were ready for operation in 1948. Concentrated calcium hypochlorite mixture was to be supplied free to all municipalities furnished the chlorinating equipment.

By the end of January 1948, about 90 percent of the supplies, materials, and equipment requisitioned for approved provincial water analysis stations were received and to be delivered to the stations as soon as trained technicians were ready to take charge. Establishment of 5 of the 8 provincial water analysis stations was approved by the Asst. Surgeon General of the Public Health Service in December 1947.

Tests made by the Manila Water Analysis Station during fiscal 1948 of water samples from numerous public water supplies, artesian and deep wells, springs and river sources in Manila and in the provinces showed need for additional chlorinization facilities. In some instances, limited use of water supplies was recommended because found positive for B. coli, indicating fecal pollution. Sewage treatment plants were recommended for some localities where sewage was found coming out of over-taxed septic tanks. Analysis of iodine content in water samples from the Indang Waterworks in Cavite, conducted following a report of high incidence of toxic goiter in the towns of Indang and Alfonso, showed lack of iodine in the samples tested.

Garbage removal in some of the most congested market districts of the City of Manila was improved considerably through use of a modern Dempster Dumpster hoisting unit and 20 steel 10 cu. yd. collecting bins purchased in the United States.

Industrial Hygiene Program. Objectives of that program included (1) surveying of industrial plants and commercial establishments, (2) activation of methods and means to promote the health of laborers in the Philippines, (3) surveys and investigations relating to industrial wastes and nuisances in different industries.

Practical application of industrial hygiene as a public health procedure is a new field of activity in the Philippines. The present program was started in May 1947. Three field units were activated to conduct inspections of industrial establishments.

During the first few months initial requisitions were approved for procedures, supplies and equipment required to activate an industrial hygiene toxological laboratory and portable laboratory equipment for use of field units. Weekly conferences were held to plan standardizing of inspections. Abstracts were compiled with reference to technical aspects and procedures of industrial hygiene and a determination of relationship to type of data necessary for a constructive program. Efforts were made also to codify standards to be used in rating industrial establishments.

In January 1948, the Chief of the Sanitary Factory Section of the Bureau of Health was appointed Chief Industrial Hygienist of the Industrial Hygiene Section of the Public Health Service and the mechanical engineer of the Metropolitan Water District was appointed Safety Engineer of the Section. These appointments were expected to bolster the work of the Section considerably. Several journals and books were received on industrial hygiene from the United States.

A wide variety of industries is surveyed each month by medical officers and investigators of the Section. On the basis of its recommendations, safety devices of various sorts and other facilities have been installed in industrial establishments to safeguard the health of the workers. Establishments inspected range from a candy factory which instituted a protective cover over an unprotected high speed belting that presented a hazard to the dresses and hair of the workers to the Manila Railroad Co. where through the initiative of the Section elaborate precautionary measures were introduced after 2 workers had been killed in a gasoline tank explosion.

In April 1948, as many as 1,177 establishments were surveyed in Manila with the help of the Bureau of Health and the City Health Department of Manila which provided the services of 5 medical officers and 11 sanitary inspectors to help the Industrial Hygiene Section. Sub-standard conditions were found in a number of places and corrections recommended. In May, an additional 455 establishments were surveyed and physical examinations were given to laborers employed in rubber shoe factories. Inspection trips were made to Northern Luzon provinces to brief District Health Officers and Presidents of Sanitary Divisions on how to conduct surveys in their provinces. The Chief Industrial Hygienist of the Public Health Service made a personal inspection and survey of the Balatoc Gold Mines and Atok Big Wedge Gold Mines in Baguio.

The Industrial Hygiene Laboratory of the Public Health Service has performed such work as (1) determination of benzol in air samples from the shoe factories, (2) preparation of reagents for qualitative and quantitative determination of lead from pots reworked from airplane scraps which had been alloyed, (3) determination of urine sulphates, (4) determination of carbon monoxide in the blood, etc.

Sanitary Food Control. Activities of the Sanitary Food Control Section of the Public Health Service and of its 6 sanitary food control units have been limited to (1) general inspection and noting of deficiencies of public eating places and other establishments engaged in preparation and dispensing of foods; (2) reporting of these deficiencies to the local health officials who are in charge of carrying out the corrective or remedial measures recommended; (3) physical examination of all food handlers; (4) lectures on sanitary preparatic of food to food handlers and interested housewives; (5) sampling of foods and

drinks and sending samples to the Division of Laboratories, Department of Health for analysis to determine compliance with Pure Food Law rules and regulations; (6) investigation and confiscation of unfit foods offered for sale.

Operations of this Section are limited because there is no law to back enforcement of the regulations. Enforcement depends upon passive persuasive measures that the units suggest and upon the ability of the City or District Health Officers with whom the units work to carry out measures recommended.

Deficiencies found are (a) lack of proper toilet and sanitary facilities in food establishments; (b) structural defects, which are very common; (c) lack of protection against flies, non-screening of many ready made foods; (d) frequent adulteration. Corrective measures are delayed. Because of lack of legal implementation the work becomes more of a crusade than a campaign for sanitary control.

As in other phases of public health activities, great difficulty has been found in obtaining the services of trained personnel. Intensive refresher courses were given at the School of Hygiene and personnel secured have to be trained in food control problems, field requirements of public food laws, methods of enforcement in the field, etc.

Four sanitary food control units were activated for Northern Luzon in the latter part of May 1947. During June 1947, they inspected 776 food establishments, made 210 re-inspections to test compliance with existing laws, made 729 physical examinations of food handlers and held 23 conferences with district health officers. All food handlers found without required health certificates were subjected to the requirements for physical examinations and were given cholera-dysentery-typhoid inoculations as required.

For the 12 months from July 1947 through June 1948, an additional 13,410 food establishments were inspected, with a total of 26,842 inspections made by six units in operation during the year and about 4,000 physical examinations were given to food handlers.

By the end of fiscal 1948, improvements were reported in various cities in (1) provision for hot water facilities for washing dishes, glasses and silverware in restaurants;(2) in toilet facilities;(3) provision for wire screening in kitchens of restaurants, carinderias and bakeries;(4) enforcement of Bureau of Health Circular No. 466-C prohibiting use of artificial yellow color in bakery products; (5) sterilization of utensils and equipment of restaurants, ice cream factories, ice plants, etc.; (6) sanitation in premises and surroundings of factories and food establishments; (7) medical examination of food handlers and cleanliness of personnel; (8) use of tongs in handling bakery products for sale; (9) provision of screened or glass cabinets for raw and cooked foods and for dishes, glasses and silverware; and (10) proper handling and serving of foods made in accordance with instructions and demonstrations given by medical officers.

Immunization Program. The objective of this program is the immunization of 90 percent of the total population of the Islands against smallpox, cholera, typhoid and dysentery by June 30, 1950, through the joint efforts of the Bureau of Health and the Public Health Service.

During the month of June 1947, about 79,000 smallpox vaccinations were made and over 65,000 inspections, with nearly 85 percent of those inspected reported as positive. For the year ending June 30, 1948, over 567,000 additional vaccinations against smallpox were made, nearly 81,500 on persons never previously vaccinated, and 438,700 inspections. About 76 percent of these inspections were

reported as positive.

Complete figures are not at this time available on the number of cholera, typhoid and dysentery inoculations made. These immunizations were also under way during fiscal 1948, although not on as extensive a scale as the smallpox control program.

MATERNAL - CHILD HEALTH AND NUTRITION

Formation of a Maternal - Child Health and Nutrition Division was agreed upon in January 1947, after conferences between the offices of the Secretary of Health and Public Welfare and the Public Health Service .

Because of their great interrelationship and to save expenses, the 4 programs of Maternal - Child Health and Nutrition, Health Education, Training Centers and Rehabilitation of Laboratories were placed under immediate administrative and operational charge of a Consultant on Maternal - Child Health and Nutrition who, as Director of Field Operations, also has direct administrative and operational control over the three other sections.

The joint program as approved in 1947 included (1) activation of 20 mobile survey demonstration and teaching units, (2) activation of 3 corrective units, (3) material aid to the North General Hospital in Manila in nutritional research, and (4) material aid and assistance in conducting field nutrition experiments with artificially enriched rice.

The purpose of the 20 survey units is to make surveys in selected areas where there are no puericulture centers or existing municipal charity clinics, regarding (1) extent of malnutrition, (2) disturbances of pregnancy and puerperium, and (3) diseases of infancy and childhood. These activities are carried out in cooperation with puericulture and other health centers, dispensaries and hospitals in making appraisals of problems encountered and in

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of operation, 2,773 consultations were held in the well-baby clinic, and BCG was given to 422 children in the well-baby clinic and to 739 new born infants. Diphtheria-pertussin-tetanus immunizations were also being given at the well-baby clinics.

Diseases found prevalent among infants and children under 6 years of age, supervised by the mobile units are: respiratory diseases, intestinal parasites, skin diseases, malnutrition (general under-nutrition), gastro-intestinal disease and acute conjunctivitis. Among older children and adults, those most prevalent are: respiratory diseases, beriberi, malnutrition, gastro-intestinal diseases, intestinal parasites and malaria.

Preparatory plans were made in 1947 for a large scale field nutrition experiment on beriberi control through the use of artificially enriched rice. This project has been sponsored by the Williams Waterman Fund, a research corporation of New York, which contributed $25,000 for employment of necessary physcians and other technical personnel, and the Hoffman-La Roche Company, Inc. of Nutley, New Jersey, which agreed to provide the vitamins and iron needed for the experiment at an estimated cost of $38,000 for the concentrated enriched rice. The Nutrition Section of the Public Health Service Rehabilitation Program was to furnish certain equipment and supplies and provide necessary machinery for mixing the rice and would supervise administration and operational activities of the program in the field.

The program includes plans for an intensive clinical survey of the incidence of beriberi in selected areas by sampling method before actual introduction of artificially enriched rice into those areas.

Bataan Province, in Luzon, with a population of 90,000, is the area to be used for the enriched rice experiment starting in 1948. The province will be divided into two parts; (a) the enriched rice area, with a population of 63,500, will receive enriched rice, and (b) the "control" area, with a population of 29,500, will continue to receive only unenriched commercial white rice. Pre-war

statistics show that the incidence of berberi in Bataan was the third highest of all provinces in the Islands. Bataan is a rice producing area. An intensive clinical resurvey 6 months and one year following introduction of the enriched rice is to be made. The Director of Field Operations for the over all United States - Philippine Joint Rehabilitation Program is to be in immediate charge of the rice enrichment project.

Health Education. The program for Health Education as submitted by the Secretary of Health and Public Welfare in March 1947, proposed activation of 4 mobile health units equipped with sound motion picture projectors for dissemination of information on public health matters throughout the Islands. These units were started out in the field the end of June 1947. Their work is closely correlated with and supplementary to the information and educational programs of the 20 Maternal - Child Health and Nutrition Units, the Malaria and Tuberculosis units, the 4 skin clinics of the Leprosy Control section and other activities and installations, mobile or fixed, of the Public Health Service Rehabilitation program.

Cooperation of the Parent Teachers' Associations, Boy Scouts and Girl Scouts, and leading citizens has been enlisted in making the health education program a success. All 4 units reported great interest and immediate enthusiasti response to the film showings and lectures on common local diseases, delivered in some areas in local dialects. In Southern Luzon, as a result of an intensive campaign conducted in cooperation with Philippine War Relief (of the U. S.), Inc., against intestinal parasites, Unit #2 reported in January 1948 people flocked to the PWR clinics in Binangonan, Rizal, and Mabini, Batangas for examination and treatment after showing of the films and lectures on ill effects of intestinal worms. From November 1947 through June 1948, over 848,000 persons attended films and lectures of the Mobile Health units in numerous

municipalities in the provinces.

Training Center Program. Prior to 1942 there were two recognized major centers in the Philippines for advanced public health training, the Institute of Hygiene and the Graduate School of Nursing, both of the University of the Philippines and almost completely destroyed as a result of war activities, including fire and looting.

During the last 3 months of fiscal 1947, money was allocated through the Rehabilitation Program for equipment and supplies for rehabilitation of the laboratory section of the Institute of Hygiene and for teaching personnel. From April through June 1947, 301 persons were trained at the Institute. Other centers of training activated were (1) the National Chest Center, administered by the T. B. Control Section of the Public Health Service, where 130 persons were trained; (2) the Malaria Laboratory administered by the Malaria Section of the Public Health Service, where 118 persons received training; and (3) the Manila Rapid Treatment Center of the V. D. Control Section of the USPHS which gave training to 123 persons, including medical officers of the Bureau of Health.

During fiscal 1948, training programs were provided to an even larger number of students in the various types of preventive medicine and allied subjects. Of 1,006 students who received training in October 1947, for example, 123 students were trained in the Department of Sanitary Engineering, Industrial Physiology and Chemistry, 237 in the Department of Sanitary Bacteriology and Immunology, 230 in the Department of Parasitology and 416 in Epidemiology, Biostatistics and Public Health Administration. Complete figures on number trained in 1948 are not available for this report.

Surveys conducted under the Training Center program include (a) A Quantitative Appraisal of the Urban and Rural Health Activities in the Philippines, (b) Inquiry into the Most Effective Use of Nurses in Public Health, and (c) A Study of Infantile Beriberi as a Cause of Infant Mortality in the Philippines.

Rehabilitation of Laboratories. Prior to December 1941, laboratories in the Philippines closely associated with the Public Health Program of the Philippine Government were: (a) the Alabang Vaccine and Serum Laboratory, Institute of Hygiene, University of the Philippines, operated by revolving funds; (b) Research Laboratory of the Institute of Hygiene, University of the Philippines, Manila; (c) Public Health Laboratory of the City of Manila; (d) San Lazaro Hospital Laboratory, operated by the Bureau of Health; (e) Bacteriological Laboratory of the Metropolitan Water District, Manila, operated for bacteriological control of Manila water supply and sewage disposal system; (f) Laboratory for Control of Animal Diseases, Bureau of Animal Industry; (g) Central Laboratory and 5 sub-stations for leprosy control, Bureau of Health; and (h) Malaria Central Laboratory at Tala, Rizal Province, Luzon.

Restoration of these laboratory facilities was given high priority as the Public Health Rehabilitation program depended very much on their use as training centers and for production of large quantities of cholera, typhoid and dysentery immunization vaccines, bacteriological control of municipal water supplies, etc.

More than a million testing activities were performed by the Manila Health Department Laboratory, aside from activities of other sections of the Division of Laboratories, during the two year period from July 1946 through July 1948. These included over 111,300 bacteriological samples tested, 169,000 serological tests, over 88,400 parasitology tests, 650,300 rats examined for bubonic plague, and 16,400 other samples tested.

QUARANTINE PROGRAM

From the time of the American occupation in 1898 until the establishment of the Republic July 4, 1946, all of the Quarantine Laws and Regulations of the United States were applicable to, and in effect in the Philippines, and except for the period of enemy occupation of the Islands and immediately following reoccupation in October 1944 up to May 22, 1946, enforcement of the Quarantine Laws and Regulations in the Philippines was the responsibility of the U. S. Public Health Service.

While under USPHS administration quarantine activities were conducted at 11 ports of entry. Two modern quarantine detention stations were maintained. One at Mariveles, Bataan, at the entrance of Manila Bay, served the needs of Manila and northern ports; the second was at Cebu for the port of Cebu and other ports of the Visayas and southern sections of the Islands. Both were totally destroyed during the war, including buildings, equipment, boarding vessels, etc. At the time of re-occupation, quarantine organization in the Philippines was non-existant.

From the time of re-occupation until May 22, 1946, full responsibility for enforcement of quarantine laws and regulations was assumed and maintained by the United States Army and Navy, almost entirely with military and naval personnel and equipment; one sanitary engineer and one medical officer were assigned from the U. S. Public Health Service. Five weeks before the end of the fiscal year 1946, responsibility for the quarantine program was placed in the hands of the Public Health Service after it had presented to the United States Government a picture of the urgent need for measures to prevent the introduction of cholera, plague, and smallpox into the Islands from nearby infected Asiatic ports; an appropriation of $50,000 by the U. S. Congress was authorized to conduct emergency projects to restore urgently needed quarantine

facilities. Funds were not available, however, for restoration of buildings.

During the/6 months from January 4, 1946 to July 4, 1946, when the quarantine responsibility was transferred to the Bureau of Quarantine of the Philippine Republic, the administration office of the Bureau of Quarantine in Manila was completely furnished and equipped with desks, typewriters, filing cabinets and supplies, and the administrative offices at Cebu and Iloilo were also equipped. Two warehouses were provided for storage of fumigating materials and supplies at Manila and 12 motor vehicles and one trailer were furnished the Quarantine Service at Manila, Cebu, Iloilo and the detention station at Mariveles Adequate floating equipment consisting of 11 boarding launches was furnished for use at ports of entry. Six Filipino physicians, selected through competitive examination, were given intensive training in all phases of quarantine activities. Salaries of these physicians were paid from U. S. Government funds.

At the Mariveles Quarantine Station, the rehabilitation work included in addition to office equipment and the installation of an adequate water supply and lighting facilities, a bacteriological laboratory, steerage barracks to accomodate approximately 300 persons and steel and canvas bunks for use of passengers in detention. A 250-bed station hospital declared surplus by the Army was purchased to secure bedding and other supplies for the quarantine station. Quarters were provided also for medical personnel and other improvements were made.

It was felt by the Public Health Service that with completion of the above projects, the Bureau of Quarantine of the Philippine Government was on July 4, 1946, enabled to officially conduct all its essential work with the exception of construction and restoration of buildings at detention stations

at Mariveles and Cebu, which were left to the War Damage Commission, facilities for conducting quarantine activities had been restored, and in some phases, surpassed their pre-war level.

Activities of the Philippine Bureau of Quarantine under the joint Philippine - Public Health Service program from July 4, 1946, to June 30, 1947, showed 1,212 vessels inspected on arrival from foreign ports, and 178,897 crew members and passengers inspected. Thirty-five vessels, 4,753 crews and 10,309 passengers were detained for quarantine. A number of vessels were inspected for rat infestation or fumigated with cyanide or sulphur. Over 37,500 persons arriving at ports were given immunization for smallpox, cholera, plague, typhus, etc.

For the 12 months ending June 30, 1948, quarantine activities were increased considerably. At the port of Manila, alone, during fiscal 1948, inspection was made of 1,381 vessels and 159,603 crew members and passengers. Twenty-nine vessels, 3,077 crew members and 5,003 passengers were detained at Manila and a large number of vaccinations and inoculations were made. A number of vessels were detained for rat infestation and fumigation. Additional quarantine activity was reported for other ports of entry, of vessels and also aeroplanes arriving from foreign countries.

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